

## A New Eyeless Spider of the Genus *Cybaeus* (Araneae: Cybaeidae) Found in a Limestone Cave of Kyushu, Japan

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入江照雄<sup>1)</sup>: 九州洞窟産の眼のないナミハグモ属の1新種

**Abstract** A new species of the genus *Cybaeus* belonging to the family Cybaeidae is described from a limestone cave of Kyushu, Japan, under the name, *Cybaeus itsukiensis* sp. nov.

Although many cave-inhabiting spiders have been reported from Japan, only two eyeless spiders were described, that is, *Comaroma nakahirai* (Yaginuma 1959) (Theridiidae) discovered in Shôbu-dô Cave in Kôchi Prefecture and *Walckenaeria uenoi* H. Saito et Irie, 1992 (Linyphiidae) discovered in Nakatô-dô Cave in Miyazaki Prefecture.

The third, and new eyeless spider in the family Cybaeidae was discovered in a limestone cave, Tsuzurase-dô Cave in Kumamoto Prefecture.

Four species of cave-inhabiting spiders of the genus *Cybaeus* have been recorded from limestone caves in Kumamoto Prefecture: *Cybaeus ashikitaensis* (Komatsu 1968) (Ashikita-dô Cave, Ashikita-machi), *C. fuujinensis* (Komatsu 1968) (Fuujin-dô Cave, Mifune-machi), *C. nichikoensis* (Komatsu 1968) (Nichikô-dô Cave, Sakamoto-mura), *C. takasawaensis* (Komatsu 1970) (Takasawa-dô Cave, Kuma-mura).

The new species is readily separated from the above 4 species by the structure of female genitalia and by lacking the eyes.

All the type specimens are deposited in the collection of the National Science Museum (Nat. Hist.), Tokyo.

I wish to express my hearty thanks to the late Dr. Takeo Yaginuma, Osaka, the late Dr. Toshihiro Komatsu, Nagano, and Dr. Shun-Ichi Ueno, National Science Museum, Tokyo, for their constant guidance.

*Cybaeus itsukiensis* sp. nov.

(Figs. 1-11)

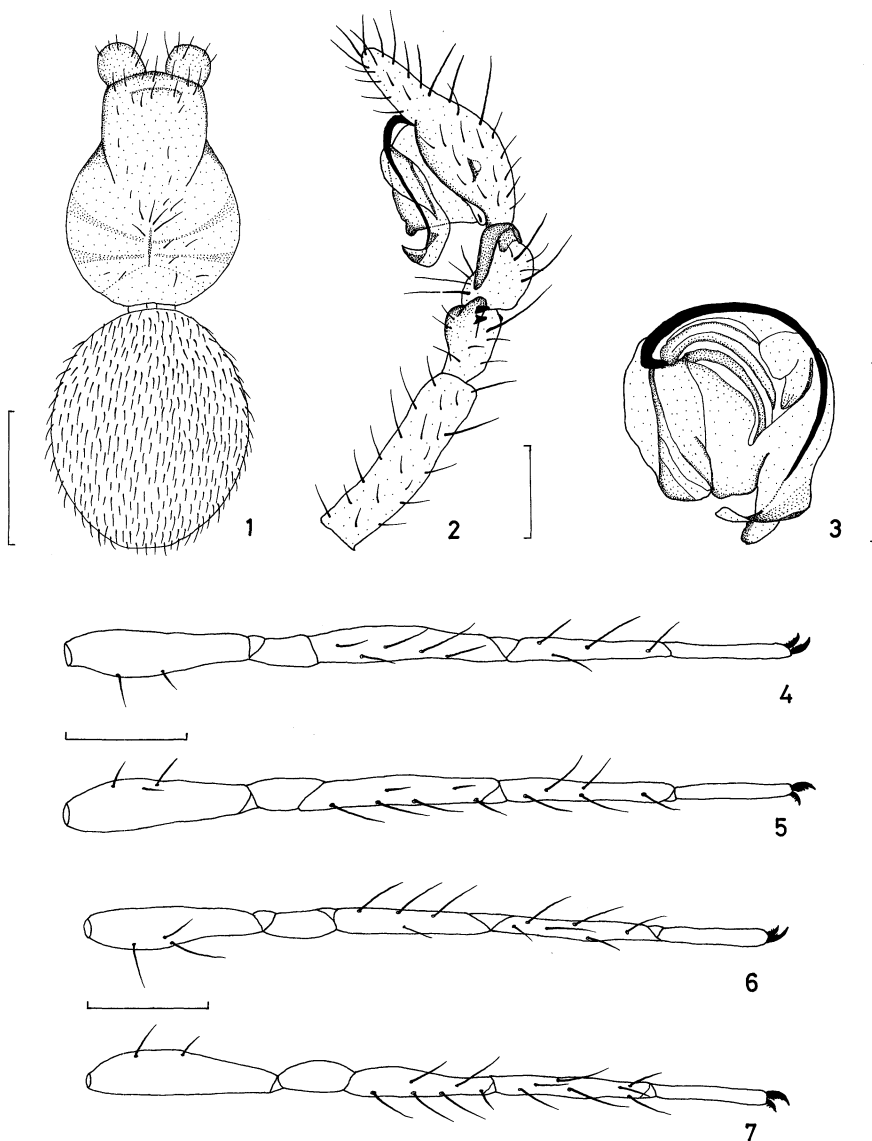
Measurements of the holotype and allotype (♂/♀; in mm). Body length 3.60/4.26. Carapace length 1.75/2.03, width 1.30/1.40. Abdomen length 1.85/1.96, width 1.50/1.40. Length of legs as shown in Table 1. Eyes completely lacking.

**Male** (holotype): Carapace pale brownish yellow, excepting yellowish brown head; slightly longer than wide. Chelicera yellowish brown; promargin of fang furrow with

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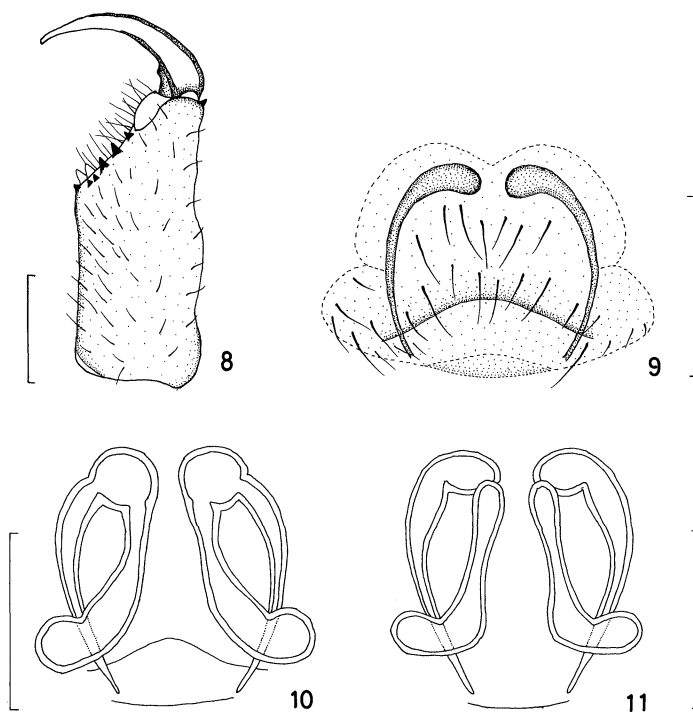
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Figs. 1-7. *Cybaeus itsukiensis* sp. nov. — 1, Male body, dorsal view; 2, left male palp, retrolateral view; 3, same, apical part of the bulb, ventral view. 4, leg I, prolateral view; 5, leg I, retrolateral view; 6, leg II, prolateral view; 7, leg II, retrolateral view. (Scales: 1, 4, 5, 6, 7, 1.0 mm; 2, 3, 0.3 mm.)

3 teeth and 2 smaller teeth, retromargin with 2 teeth and 1 smaller tooth. Sternum brownish yellow; almost as long as wide. Labium yellowish brown; slightly longer than wide, 1.2 : 1 in ratio. Leg yellowish brown; leg formula 4,1,2,3; measurements (in



Figs. 8-11. *Cybaeus itsukiensis* sp. nov. — 8, left chelicera of male, ventral view; 9, epigynum, ventral view; 10, female genitalia, ventral view; 11, same, dorsal view. (Scales: 0.3 mm.)

Table 1. Measurements of legs of *Cybaeus itsukiensis* sp. nov. ( $\sigma/\varphi$ : in mm).

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	1.60/1.76	0.63/0.66	1.60/1.73	1.36/1.40	0.93/0.93	6.12/6.48
II	1.50/1.66	0.56/0.66	1.40/1.53	1.33/1.40	0.90/0.86	5.69/6.11
III	1.33/1.40	0.63/0.56	1.00/1.23	1.26/1.26	0.81/0.83	5.03/5.28
IV	1.56/1.73	0.56/0.56	1.60/1.66	1.66/1.75	1.05/1.03	6.43/6.73

mm) are as shown in Table 1. Spination (following Komatsu 1968) as shown in Figs. 4-7. Tibia I with PVS1, PVS2, PVS3, PLS3, PLS4 and RVS1, RVS2, RVS3, RVS4. Tibia II with PVS1, PVS2, PVS3, PLS3, PLS4 and RVS1, RVS2, RVS3, RVS4. Metatarsus I with PVS1, PVS2, PVS3, PLS2 and RVS1, RVS2, RVS3, RLS. Metatarsus II with PVS1, PVS2, PVS3, PLS1, PLS2, PLS3 and RVS1, RVS2, RVS3, RLS, VS. Abdomen pale grayish yellow, without marking.

Male palp: Tibia short and almost as long as patella. Palpal patella with a thumb-like apophysis on which 2 teeth exist. Genital bulb circle, as shown in Fig. 3. Conductor thick and the apex bifurcate.

*Female* (allotype): Legs longer than those of the male. Length of legs as shown in Table 1. Genitalia as shown in Figs. 9-11. Other characters as same as in the male holotype.

*Type series.* Holotype: ♂, Tsuzurase-dô Cave, Itsuki-mura, Kuma-gun, Kumamoto Prefecture, Japan, 30-V-1993, T. Irie and N. Kinoshita leg. (NSMT-Ar3845); allotype: ♀, 24-XI-1991, same locality as for the holotype, T. Irie and N. Kinoshita leg. (NSMT-Ar3846). Paratypes: 1 ♀, 27-XI-1977, 1 ♀, 10-X-1982, 1 ♀, 5-VIII-1983, 2 ♀, 19-X-1994, 1 ♀, 15-XI-1995, same locality as for the holotype, T. Irie leg.

*Variation* (in mm). Body length ♀ 4.12-4.60.

*Distribution.* This species can be regarded as a troglobiontic spider occurring only in Tsuzurase-dô Cave of Kumamoto Prefecture, Japan.

*Remarks.* This new species is readily separated from any other species of *Cybaeus* by lacking the eyes, by the difference in the structure of male palp and epigynum.

*Etymology.* The specific name is derived from the type locality.

## 摘 要

熊本県五木村九折瀬洞産のナミハグモ科の1新種を *Cybaeus itsukiensis* sp. nov. イツキメナシナミハグモ (新称) と命名して記載した。同種は眼をまったく欠く、真洞窟性のクモと考えられる。

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